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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/830,623  | 09/06/2001  | Reinhold Braam       | 112740-190          | 9386             |
| 29177   | 7590        | 06/16/2005           | EXAMINER            |                  |
| BELL, BOYD & LLOYD, LLC<br>P. O. BOX 1135<br>CHICAGO, IL 60690-1135 |             |                      | BUI, BING Q         |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2642                |                  |

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/830,623

**Applicant(s)**

BRAAM ET AL.

**Examiner**

Bing Q. Bui

**Art Unit**

2642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/23/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date, \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's Preliminary Amendment filed on 4/27/01 has been entered. No claims have been amended. Claims 1-9 have been cancelled. Claims 10-18 have been added. Claims 10-18 are still pending in this application, wherein claims 10 being independent.

### ***Specification***

2. The abstract of the disclosure is objected to because it is required to be displayed in a separate page. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before

Art Unit: 2642

November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 10-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakano et al (US Pat No. 6,011,787).

Regarding claim 10, referring to figures 1 and 23-25, Nakano et al teach a rake receiver for telecommunication systems with wireless telecommunication between at least one of mobile transceivers and stationary transceivers, in third-generation mobile radio systems, comprising a pipeline architecture having a plurality of pipeline stages, wherein individual signal processing steps are processed as on a pipeline (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Regarding claim 11, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 10, wherein there are three pipeline stages (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Regarding claim 12, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 10, further comprising a plurality of registers for data buffering between the pipeline stages (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Regarding claim 13, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 10, further comprising a plurality of hardware circuits in a first of the plurality of pipeline stages, the plurality of hardware circuits able to be used in a time-division multiplex method (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Art Unit: 2642

Regarding claim 14, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 10, further comprising a first hardware circuit which supports soft handover in a first of the plurality of pipeline stages (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Regarding claim 15, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 14, further comprising a second hardware circuit which provides for code combining in the first of the plurality of pipeline stages (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Regarding claim 16, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 15, further comprising an interpolation part which enables conjugate complex coefficients to be determined by interpolation between two channel estimations in a second of the plurality of pipeline stages (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Regarding claim 17, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 10, wherein the pipeline architecture can be flexibly adapted to word widths and clock rates by inserting parallel processing branches (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

Regarding claim 18, referring to figures 1 and 23-25, Nakano et al teach the rake receiver for telecommunication systems as claimed in claim 16, further comprising a third hardware circuit which provides for low- expenditure early and

Art Unit: 2642

late tracking of rake fingers in a third of the plurality of pipeline stages (see Figs 1 and 23-25; and col. 16-col. 17, ln 11).

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art in general:

U.S. Pat. No. 5,303,261

U.S. Pat. No. 6,064,649

U.S. Pat. No. 6,470,000

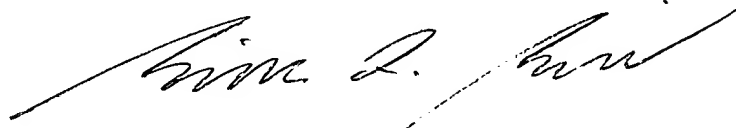
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bing Bui whose telephone number is (571) 272-7482. The examiner can normally be reached on Monday through Thursday from 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on (571) 272-7488. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 and for formal communications intended for entry (please label the response ☐EXPEDITED PROCEDURE☐) or for informal or draft communications not intended for entry (please label the response "PROPOSED" or "DRAFT").

Art Unit: 2642

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

04 June 2005

A handwritten signature in black ink, appearing to read "Bing Q. Bui", written in a cursive style.

**BING Q. BUI  
PRIMARY EXAMINER**